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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,657	07/28/2003	Hiromitsu Nishikawa	01272.020604.	4465
5514 7590 06/04/2007 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER MENBERU, BENIYAM	
			ART UNIT 2625	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/627,657	Applicant(s) NISHIKAWA ET AL.	
	Examiner Beniyam Menberu	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/17/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 4, line 24, "colormaterial" should be "color material".

On page 4, line 25, "colormaterials" should be "color materials".

On page 6, line 8, "printingmedium" should be "printing medium".

On page 17, lines 19-20, "color materials M, C, and K." should be "color materials Y, M, C, and K.".

On page 18, line 2, "user of service" should be "user or service".

On page 18, line 15, "total mount" should be "total amount".

Appropriate correction is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: references s705 and s706 in Figure 7. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each

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drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 19 discloses a program which is non-statutory. Claim 19, line 1 should read "A computer readable medium storing a computer program to make the computer"

Claim 20, lines 1-2 should read "A computer readable medium storing a computer program, the program making the computer execute an image"

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 6, 8, 10, 12, 13, 15, 17, 19, and 20 are rejected under 35

U.S.C. 102(e) as being anticipated by U.S. Patent No. 6637849 to Maltz.

Regarding claims 1, 10, 19, and 20 (column 9, lines 22-30), Maltz discloses an image processing method of generating color material data for using a plurality kinds of color material to output an image (column 5, lines 39-45, lines 62-67; column 6, lines 1-3), said method comprising the steps of: inputting an image signal (column 8, lines 42-45); and generating a combination of the color material data for the plurality kinds of color material (column 6, lines 5, lines 63-67; column 6, lines 1-24, 53-67; column 7, lines 13-44; C", M", Y" represent the combination of color material.) so that a total color material use amount of the plurality kinds of color material (column 6, lines 12-44), which is determined according to the combination of said plurality kinds of color material corresponding to the inputted image signal, meets a smooth function for the total color material use amount within a range of the image signal that can be inputted (column 6, lines 45-67; column 7, lines 1-67; column 8, lines 1-33, 59-64).

Regarding claims 3 and 12, Maltz teaches all the limitations of claims 1 and 10. Further Maltz discloses an image processing method as claimed in claim 1, wherein said step of generating the combination generates the combination corresponding to the inputted image signal with reference to a table (column 5, lines 7-27, 52-67; column 6,

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lines 1-3), which determines the combination of the plurality kinds of color material so that the total color material use amount of the plurality kinds of color material, which is determined according to the combination of said plurality kinds of color material, meets the smooth function for the total color material use amount within a range of the image signal that can be inputted (column 6, lines 12-44; column 6, lines 45-67; column 7, lines 1-67; column 8, lines 1-33, 59-64).

Regarding claims 4 and 13, Maltz teaches all the limitations of claims 1 and 10. Further Maltz discloses an image processing method as claimed in claim 1, further comprising the step of forming the smooth function for the total color material use amount (column 7, lines 65-67; column 8, lines 1-33).

Regarding claims 6 and 15, Maltz teaches all the limitations of claims 1 and 10. Further Maltz discloses an image processing method as claimed in claim 1, wherein colors of the plurality kinds of color material are yellow, magenta, cyan, and black (column 6, lines 29-35).

Regarding claims 8 and 17, Maltz teaches all the limitations of claims 1 and 10. Further Maltz discloses an image processing method as claimed in claim 1, wherein the color material is ink (column 6, lines 4-10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6637849 to Maltz in view of U.S. Patent No. 6480299 to Drakopoulos et al.

Regarding claims 2 and 11, Maltz teaches all the limitations of claim 1. Further Maltz discloses an image processing method as claimed in claim 1, wherein said step of generating the combination

determines a smooth variation of the total color material use amount to a variation of a predetermined color represented by the inputted image signal (column 6, lines 12-50),

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and

so that the total color material use amount of the plurality kinds of color material meets the smooth function for the total color material use amount within a range of the image signal that can be inputted (column 6, lines 12-50; column 7, lines 1-67; column 8, lines 1-33, 59-64). However Maltz does not disclose wherein

determines all combinations of the plurality kinds of color material corresponding to the inputted image signals,

calculates the total color material use amounts for said all combinations of the plurality kinds of color material,

selects the total color material use amount meeting the determined smooth variation of the total color material use amount from the determined combinations of the plurality kinds of color material.

Drakopoulos et al disclose:

determines all combinations of the plurality kinds of color material corresponding to the inputted image signals (column 25, lines 7-40; Plural CMYK value 252 are generated corresponding to input LAB 234 as shown in Figure 31),

calculates the total color material use amounts for said all combinations of the plurality kinds of color material (column 25, lines 28-34),

selects the total color material use amount meeting the determined smooth variation of the total color material use amount from the determined combinations of the plurality kinds of color material (column 25, lines 28-40; The minimization can read on smooth since the error is being minimized.).

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Maltz and Drakopoulos et al are combinable because they are in the similar problem area of color data processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the color processing of Drakopoulos et al with the system of Maltz to implement color selection based on total color amount.

The motivation to combine the reference is clear because the system of Drakopoulos et al generates accurate CMYK data (column 8, lines 20-26).

8. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6637849 to Maltz in view of U.S. Patent No. 6058207 to Tuijin et al further in view of U.S. Patent No. 7102785 to Tamagawa.

Regarding claims 5 and 14, Maltz teaches all the limitations of claims 4 and 13. However Maltz does not disclose an image processing method as claimed in claim 4, wherein said step of forming the smooth function displays function for a total color material use amount for a predetermined color on a display device and forms the smooth function based on input by an operation on the display.

Tuijin et al displays function for a total color material use amount for a predetermined color on a display device (column 6, lines 57-67; column 7, lines 1-12).

Tamagawa discloses wherein said step of forming the smooth function forms the smooth function based on input by an operation on the display (Figure 22; column 14, lines 48-67; column 15, lines 1-3).

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Maltz, Tuijin et al, and Tamagawa are combinable because they are in the similar problem area of color data processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the display function of Tuijin et al and the smooth function of Tamagawa to implement user based color adjusting system.

The motivation to combine the reference is clear because the system of Tuijin et al provides flexibility for color correction (column 3, lines 6-21) and the system of Tamagawa compensates for artifact in the color profile generation (column 2, lines 3-35).

9. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6637849 to Maltz in view of U.S. Patent No. 5982990 to Gondek.

Regarding claims 7 and 16, Maltz teaches all the limitations of claims 1 and 10. Maltz discloses wherein colors of the plurality kinds of color material are yellow, magenta, cyan, black. However Maltz does not disclose an image processing method as claimed in claim 1, wherein colors of the plurality kinds of color material are light magenta having lower concentration than the magenta and light cyan having lower concentration than the cyan.

Gondek discloses wherein colors of the plurality kinds of color material are light magenta having lower concentration than the magenta and light cyan having lower concentration than the cyan (column 4, lines 44-49; column 3, lines 48-61).

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Maltz and Gondek are combinable because they are in the similar problem area of color data processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the light/magenta, cyan of Gondek with the system of Maltz to implement additional colors for printing.

The motivation to combine the reference is clear because Gondek teaches that higher color printing quality is possible using additional inks (column 2, lines 34-43).

10. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6637849 to Maltz in view of U.S. Patent No. 6577826 to Misaizu et al.

Regarding claims 9 and 18, Maltz teaches all the limitations of claims 1 and 10. However Maltz does not disclose an image processing method as claimed in claim 1, wherein the color material is toner.

Misaizu et al disclose wherein the color material is toner (column 5, lines 45-55).

Maltz and Misaizu et al are combinable because they are in the similar problem area of color data processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the toner of Misaizu et al with the system of Maltz to provide toner material for printing.

The motivation to combine the reference is clear because toner can be adjusted to provide higher quality of image for specific kinds of media (column 5, lines 35-49).

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Other Prior Art Cited

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 7196823 to Hagai et al disclose color transformation.

U.S. Patent No. 6721063 to Harrington discloses color processing system.

U.S. Patent No. 6278533 to Takemoto discloses color transformation system.

U.S. Patent No. 7032989 to Nishikawa discloses system for color tables.

U.S. Patent Application Publication Pub. No. US 2003/0072473 A1 to Livens et al disclose analyzing of printer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Beniyam Menberu

BM

05/27/2007



KIMBERLY WILLIAMS
PRIMARY PATENT EXAMINER